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10/767,432	01/30/2004	Tomoyuki Iijima	ASAM.0106	6406
7590 REED SMITH LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042				
			EXAMINER	
			WONG, BLANCHE	
		ART UNIT	PAPER NUMBER	
		2619		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/767,432

**Applicant(s)**

IIJIMA ET AL.

**Examiner**

BLANCHE WONG

**Art Unit**

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on January 7, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 1,2,4-8 are objected to because of the following informalities:

With regard to claim 1, Examiner suggests replacing "said routing information managed by said one of the virtual routers realized and activated on said active router" in lines 23-24 with "said routing information managed by two or more of said plurality of virtual routers realized and activated on said active router" in consistent with "said routing information managed by two or more of said plurality of virtual routers realized and activated on said active router" in lines 13-15.

With regard to claim 2, Examiner suggests replacing "said packet that includes said identification information of said virtual routers realized and activated on said active router" in lines 3-4 with "said packet that includes identification information" or "said packet that includes identification information of one of said two or more virtual routers realized and activated on said active router" in consistent with "a packet including identification information of one of said two or more virtual routers realized and activated on said active router" in claim 1, line 18-19.

With regard to claim 4, Examiner suggests replacing "said packet including said identification information of said virtual routers realized and activated on said active

router" in lines 2-4 with "said packet that includes identification information" or "said packet that includes identification information of one of said two or more virtual routers realized and activated on said active router" in consistent with "a packet including identification information of one of said two or more virtual routers realized and activated on said active router" in claim 1, line 18-19.

With regard to claim 5, Examiner suggests replacing "said packet including said identification information of said virtual routers realized and activated on said active router" in lines 3-5 with "said packet that includes identification information" or "said packet that includes identification information of one of said two or more virtual routers realized and activated on said active router" in consistent with "a packet including identification information of one of said two or more virtual routers realized and activated on said active router" in claim 1, line 18-19.

With regard to claim 5, Examiner suggests replacing "said virtual routers realized and activated on said active router" in lines 5-6 and line 7 with "said two or more virtual routers realized and activated on said active router" in consistent with "a packet including identification information of one of said two or more virtual routers realized and activated on said active router" in claim 1, line 18-19.

With regard to claims 6-8, Examiner suggests replacing "said packet including said identification information of said virtual routers realized and activated on said active router" in lines 2-3 with "said packet that includes identification information" or "said packet that includes identification information of one of said two or more virtual routers realized and activated on said active router" in consistent with "a packet including

identification information of one of said two or more virtual routers realized and activated on said active router" in claim 1, line 18-19.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 1-10** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "[t]he active router 11 and the standby router 12 are connected to each other through a communication channel 66 that is connected to network interfaces 56 of the active and standby routers" (Specification, p.11, para. 1) and "[w]hen the two routers are placed within a single housing, those routers may be connected not through the networking I/F, but directly by a VRRP packet transfer dedicated line between switches 64" (Specification, p.12, para. 1), does not reasonably provide enablement for "whereby when synchronizing said routing information managed by two or more of said plurality of virtual routers realized and activated on said active router with said routing information managed by corresponding two or more of the virtual routers realized but not yet activated on said standby router, said processor provided on said active router transmits to said standby router a packet including identification information of one of said two or more virtual routers realized and activated

on said active router, receives a response signal relative to said identification information from said corresponding virtual routers realized but not yet activated on said standby router ..." (claim 1). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Specification further discloses that in the prior art, the problem is that "there is no means by which the route information that the active router has so far managed is classified depending on VR1, VR2 and transferred to the standby router 12" (p.6, para. 2). Even if Specification discloses synchronizing said routing information between the active and standby routers, it is unclear whether there is the synchronization between the virtual routers of the active router and the corresponding virtual routers of the standby routers in claim 1, and if so, how to implement such synchronization from what is disclosed in the Specification. That is, how the invention resolves the prior art problem.

5. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for active and standby routers, does not reasonably provide enablement for "realized and activated" and "realized and not yet activated" virtual routers (claim 1). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, it is unclear which processor is "said processor" in lines 12.

With regard to claim 1, it is unclear what is meant by "a program memory in which a program to be executed by said processor is previously stored" in lines 12-13 because "each of said active router and said standby router includes ..." a program memory in lines 6-7. That is, it is unclear whether two copies of a program is each stored in the program memory of the active and standby routers and executed by the respective processor of the routers. If so, it is unclear which copy of the program is executed for "synchronizing said routing information ..." in line 13.

With regard to claims 2-10, it is unclear whether these claims are referencing a redundancy packet transmission router, or system, according to claim 1.

8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1, lines 10-11, "the routing processing of said received packet".

Claim 1, line 16, "corresponding two or more of the virtual routers ... on said standby router".

Claim 3, lines 2-3, "said routing information managed by said corresponding virtual routers realized and activated on said standby router".

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. Pat No. 5,473,599) in view of Jensen (U.S. Pat No. 7,092,354).

With regard to claim 1, Li discloses

an active router (**active router**) ("**At any one time, one of the routers R1,R2, or R3 assumes the state of active routers, col. 6, lines 40-41**") and a standby router (**standby router**) ("**One of the routers in the group (R1,R2, or R3) assumes the state of standby (or backup) router, col. 6, lines 58-59**"), each of which includes a function (**the protocol for emulating a virtual router, col. 7, lines 36-37**) to realize a plurality of virtual routers therein (**See Also "when different hosts on a LAN have their own standby groups of routers, col. 7, lines 32-33**); and

wherein each of said active router and said standby router includes:

a network interface (**interfaces 12,68 in Fig. 1**) accommodating communication channels;



a processor (**processor 63 in Fig. 1**) for making a predetermined process on a received packet;

a table memory (**memory 62 in Fig. 1**) for storing routing information necessary for the predetermined process on said received packet; and

a program memory (**memory 62 in Fig. 1**) in which a program (**protocol**) (**the protocol for emulating a virtual router, col. 7, lines 36-37**) to be executed by said processor is previous stored.

However, Li fails to explicitly show an internal wiring conductor to connect said active router and said standby router, and whereby when synchronizing said routing information managed by two or more of said plurality of virtual routers realized and activated on said active router with said routing information managed by corresponding two or more of the virtual routers realized but not yet activated on said standby router, said processor provided on said active router transmits to said standby router a packet including identification information of one of said two or more virtual routers realized and activated on said active router, receives a response signal relative to said identification information from said corresponding virtual routers realized but not yet activated on said standby router, and transmits to said standby router said routing information managed by said two or more virtual routers realized and activated on said active router.

Jensen discloses

an internal wiring conductor (**connected by communications media, col. 1, lines 54-55; "link", col. 1, line 63**) to connect said active router and said standby router, and

whereby when synchronizing (**matching**) said routing information (**routing information**) ("**... periodically send routing information updates to router 108. Router 108 would update its routing table to reflect this received routing information, thereby making sure that it has a routing table matching router 106", col. 6, lines 19-22**) managed by two or more of said plurality of virtual routers realized and activated on said active router ("**In a VRRP system, one router may be elected as the master router wither the other routers acting as backups in case of the failure of the master router", col. 2, lines 28-31**) with said routing information managed by corresponding two or more of the virtual routers realized but not yet activated on said standby router,

said processor provided on said active router transmits to said standby router a packet including identification information of one of said two or more virtual routers realized and activated on said active router ("**If [standby] router 108 receives the control information outside of the predetermined time ...", col. 6, lines 39-40**), receives a response signal relative to said identification information from said corresponding virtual routers realized but not yet activated on said standby router ("**[Standby] router 108 may inform the [other] network nodes ...", col. 6, lines 51-52**), and transmits to said standby router said routing information managed by said two or more virtual routers realized and activated on said active router ("**... periodically**

**send routing information updates to router 108. Router 108 would update its routing table to reflect this received routing information, thereby making sure that it has a routing table matching router 106", col. 6, lines 19-22).**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine an internal wiring conductor to connect said active router and said standby router, and whereby when synchronizing said routing information managed by two or more of said plurality of virtual routers realized and activated on said active router with said routing information managed by corresponding two or more of the virtual routers realized but not yet activated on said standby router, said processor provided on said active router transmits to said standby router a packet including identification information of one of said two or more virtual routers realized and activated on said active router, receives a response signal relative to said identification information from said corresponding virtual routers realized but not yet activated on said standby router, and transmits to said standby router said routing information managed by said two or more virtual routers realized and activated on said active router as taught by Jensen, with Li, in order to implement VRRP that uses the concept of a virtual router and provides a mechanism for transferring the duties to another router in the case of failure of the master router.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLANCHE WONG whose telephone number is (571)272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/  
Examiner, Art Unit 2619  
April 3, 2008

/Edan Orgad/  
Supervisory Patent Examiner, Art Unit 2619